



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,287	01/29/2001	Yong Ho Son	DIVA/253	9290

56015 7590 03/29/2006

PATTERSON & SHERIDAN, LLP/
SEDNA PATENT SERVICES, LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER

USTARIS, JOSEPH G

ART UNIT PAPER NUMBER

2623

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,287

Applicant(s)

SON ET AL.

Examiner

Joseph G. Ustaris

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-26, 28-33, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-13, 15-19, 21-24, 28-33, 35 and 36 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 20, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 18 January 2006 in application 09/772,287. Claims 1-13, 15-26, 28-33, 35, and 36 are pending. Claims 1, 17, and 19 are amended.

The indicated allowability of claims 11, 12, 14, 24, 27, 31, and 32 from the previous Office Action is withdrawn in view of the newly discovered reference(s) to Greer et al. (US006247048B1). Rejections based on the newly cited reference(s) follow.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13, 15-26, 28-33, 35, and 36 have been considered but are moot in view of the new ground(s) of rejection.

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 8, 11-13, 15-19, 24, 28-33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US006557031B1) in view of Greer et al. (US006247048B1).

Regarding claim 1, Mimura et al. (Mimura) discloses a system for streaming content to at least one access network of a plurality of networks (See Fig. 8; CATV Networks and Internet). The system inherently retrieves content from the server or "local streaming server", wherein the content is encapsulated according to an Internet Protocol (IP) packet structure in order to successfully deliver the content to the CATV networks via the Internet (See Fig. 8, server 52, interworking unit 62, and CATV network 56). The server also "processes the content into a format native" to the CATV network from which a user request originated (See Figs. 8 and 10, server 52, interworking unit 62, CATV network 56, and STB 57; column 12 line 47 – column 13 line 14). The server then streams the processed content to the CATV network or "access network" via the Internet or "distribution network", wherein the Internet uses a different format than the CATV networks (See Fig. 8, server 52, Internet 50, interworking unit 62, CATV network 56, and STB 57; column 12 line 47 – column 13 line 14). The content is extracted from the IP packet at the interworking unit 62 downstream of the Internet or "distribution network" to form the MPEG-TS used on the CATV network (See Fig. 8, interworking unit 62; column 12 line 47 – column 13 line 14). However, Mimura does not disclose heterogeneous access networks.

Greer et al. (Greer) discloses a system for accessing Internet content from mobile devices. Greer discloses that devices on a carrier network are able to access

Art Unit: 2623

content on server located on the Internet (See Fig. 1; column 3 lines 28-45). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Mimura to allow a carrier network to access content located on a server within the Internet, as taught by Greer, in order to expand their services to wireless users thereby providing mobility and portability (See column 1 lines 14-27). Mimura in view of Greer provides heterogeneous access networks (e.g. the CATV network and the carrier network).

Regarding claim 2, the system also “preprocesses content into at least one packet” (See Mimura Fig. 6) that has a format and size optimized for streaming, which inherently includes “storage and retrieval at a local streaming server” (See Mimura Fig. 8, Server, Internet Server). Furthermore, the system “encapsulates at least one packet of content in a payload portion of a real time transport protocol (RTP) packet; and encapsulating the RTP packet in a payload portion of said IP packet” (See Mimura column 2 lines 32-54).

Regarding claim 4, the system inherently stores the video data “on a storage medium coupled to said local streaming server” (See Mimura Fig. 8; Server, Internet Server).

Regarding claim 5, the system disclosed by Mimura retrieves the video data from the servers “in response to a user request from at least one access network” (See Mimura Fig. 8; column 9 lines 15-26 and column 13 line 66 – column 14 line 6).

Regarding claim 8, the system streams the video data “in real time” (See Mimura column 10 lines 28-31; column 12 lines 25-28).

Regarding claim 11, inherently server 52 within the system retrieves the video data or "content" from "a local storage device" and sends the video data "encapsulated" within an IP packet. Furthermore, Mimura discloses that a real-time MPEG encoder is used to provide an MPEG signal or "transcoding content into MPEG-1 or MPEG-2" (See Mimura column 8 lines 46-57), where inherently the "transcoding occurs after storage" in order to provide MPEG packets that is encapsulated within an IP packet.

Regarding claim 12, the system "separates IP packet into a header portion and a payload portion encapsulating at least one packet of content" (See Mimura Fig. 6 and 11), wherein the video data or "content" is in MPEG and PES format to be compatible with both IP network and its native CATV network or "converting at least one packet of content into a format supported by said access network" (See Mimura column 10 lines 43-62). The "header portion" and "said converted at least one packet of content" are packetized into the IP packet (See Mimura Fig. 6 and 11).

Regarding claim 13, the "access networks" are a CATV network or "cable network" (See Mimura Fig. 8), the Internet or "internet network" (See Mimura Fig. 8), and a carrier network (See Greer Fig. 1).

Regarding claim 15, the system send video data from the CATV network to the set-top-box (STB) or from the Internet to the client or "transmitting content from at least one access network to subscriber equipment of a requester for content" (See Mimura Fig. 8, 9, and 26).

Regarding claim 16, the system includes a CATV networks, Internet, and other access networks, i.e. DAVIC networks and carrier networks or "wherein at least one

Art Unit: 2623

access network comprises a plurality of non-homogeneous access networks" (See Mimura Fig. 8, 9, and 26 and Greer Fig. 1).

Claim 17 contains the limitations of claims 1 and 5 (wherein the system is also considered an "interactive information distribution system" and where the maximum transfer unit (MTU) size of an IP packet can change based on the network or "providing scalable streaming" (See Mimura column 10 line 63 – column 11 line 15)) and is analyzed as previously discussed with respect to those claims. Furthermore, the system includes a server 52 or "at least one stream caching server" that distributes content to a CATV network or "at least one access network" via Internet or "distribution network" as discussed in claim 1 above (See Mimura Fig. 8). The server 52 also serves the function as the "packet processor", where it is "coupled to at least one stream server for processing encapsulated content within said IP packets into at least one packet in a format native to said at least one access network of said plurality of heterogeneous access networks" (See Figs. 8 and 10, server 52, interworking unit 62, CATV network 56, and STB 57; column 12 line 47 – column 13 line 14). The server then streams the processed content to the CATV network or "access network" via the Internet or "distribution network", wherein the Internet uses a different format than the CATV networks (See Fig. 8, server 52, Internet 50, interworking unit 62, CATV network 56, and STB 57; column 12 line 47 – column 13 line 14). Furthermore, the system "encapsulates at least one packet of content in a payload portion of a real time transport protocol (RTP) packet; and encapsulating the RTP packet in a payload portion of said IP packet" (See Mimura column 2 lines 32-54). The payload contains a number of

packets that includes a transport stream (TS) header or "read block" that is used "for transcoding of content packets into a format supported by said access network" (See Mimura Fig. 11).

Claim 18 contains the limitations of claims 16 and 17 and is analyzed as previously discussed with respect to those claims.

Claim 19 contains the limitations of claims 2 and 17 and is analyzed as previously discussed with respect to those claims.

Regarding claim 24, Mimura discloses that a real-time MPEG encoder is used to provide an MPEG signal or "transcoding content into MPEG-1 or MPEG-2" (See Mimura column 8 lines 46-57), where inherently the interworking unit would restore the MPEG packets from the IP packets or "transcode contents into...MPEG-1 or MPEG-3" (See Mimura Fig. 8).

Regarding claim 28, the interworking unit also serves the functions of the "data link converter" where it "transfers content to subscriber equipment of a requester for said content" via Internet, CATV network, or access network (See Mimura Fig. 8).

Claim 29 contains the limitations of claims 1, 17, and 28 and is analyzed as previously discussed with respect to those claims.

Claim 30 contains the limitations of claims 13 and 18 and is analyzed as previously discussed with respect to those claims.

Regarding claim 31, the system inherently includes a "at least one random access data server coupled to said at least one stream server via said distribution

network” in order to provide a video guide or electronic program guide (EPG) (See Mimura column 14 lines 17-27).

Regarding claim 32, the “data server” discussed above is inherently an “electronic program guide server” in order to provide the EPG to the user.

Regarding claim 33, the servers disclosed by Mimura are “video-on-demand” servers, where the user is able to request a video and it is delivered to the user as discussed in claim 5 above.

Regarding claim 35, Mimura in view of Greer does not disclose that the distribution network comprises one or more of a synchronous optical network (SONET) and an asynchronous transfer mode (ATM) network.

Official Notice is taken that it is well known to use SONET and ATM networks for distribution. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the distribution network disclosed by Mimura in view of Greer to comprise one or more of a SONET and ATM network in order to provide a more reliable distribution network that uses a well known and established transfer protocol thereby ensuring that the subscriber receives the requested data.

Regarding claim 36, the access networks comprise the Internet or “wide area network” and a CATV coaxial network or “cable television distribution network” (See Mimura Fig. 8).

Claims 3 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US006557031B1) in view of Greer et al. (US006247048B1) as applied to

Art Unit: 2623

claims 1, 2, 4, 5, 8, 11-13, 15-19, 24, 28-33, 35, and 36 above, and further in view of Zheng et al. (US006611522B1).

Regarding claim 3, Mimura in view of Greer does not disclose “formatting content to support playback at a quality of service (QoS) corresponding to at least one access network”.

Zheng et al. (Zheng) discloses a QoS system for use within an Internet protocol digital communication system. The system is able to schedule and shape the output of the packaged data based on the QoS parameters given for the network and output or “formatting content to support playback at a quality of service (QoS) corresponding to at least one access network” (See column 11 line 34 – column 12 line 14). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and servers to “format content to support playback at a quality of service (QoS) corresponding to at least one access network”, as taught by Zheng, in order to ensure that the user will receive the video data and for the video data to at the highest quality possible thereby enhancing the user’s entertainment experience.

Claim 23 contains the limitations of claims 3 and 17 and is analyzed as previously discussed with respect to those claims.

Claims 6, 7, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US006557031B1) in view of Greer et al.

Art Unit: 2623

(US006247048B1) as applied to claims 1, 2, 4, 5, 8, 11-13, 15-19, 24, 28-33, 35, and 36 above, and further in view of Wahl (US005898456A).

Regarding claim 6, Mimura in view of Greer does not disclose “retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server”.

Wahl discloses a communications system with hierarchical server structure used for video-on-demand services. Wahl discloses that if the user requests a movie that is not available from a local server, the local server then requests the movie from a central server or “retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server” (See column 1 lines 32-39). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and servers to “retrieve content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server”, as taught by Wahl, in order to ensure that the requested video data is successfully delivered to the user.

Regarding claim 7, furthermore Mimura in view Greer and in further view of Wahl discloses that the “retrieved content from said remote stream server is stored on said storage medium coupled to said local stream server” (See Wahl column 1 lines 35-40). Furthermore, the movies are transferred based on the number of times the movie has been requested, where movies that are frequently requested are located on the local servers or “in an instance where a predefined user request threshold has been

Art Unit: 2623

exceeded” and movies less frequently requested are located at the central server (See Wahl column 1 lines 25-47).

Claim 21 contains the limitations of claims 6 and 17 (wherein Mimura in view Greer and in further view of Wahl disclose a central or “remote” server and a local server) and is analyzed as previously discussed with respect to those claims.

Claim 22 contains the limitations of claims 6 and 21 (wherein Mimura in view Greer and in further view of Wahl discloses that video data is retrieved from a central server if it is unavailable at the local server) and is analyzed as previously discussed with respect to those claims.

Allowable Subject Matter

4. Claims 9-10, 20, and 25-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9-10, the prior art of record fails to show or fairly suggest transcoding the content prior to storage.

Regarding claim 20, the prior art of record fails to show or fairly suggest that the content is stored as IP packets.

Regarding claims 25-26, the prior art of record fails to show or fairly suggest transcoding the content prior to storing/streaming the IP packets.

Conclusion


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JGU

March 23, 2006


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600